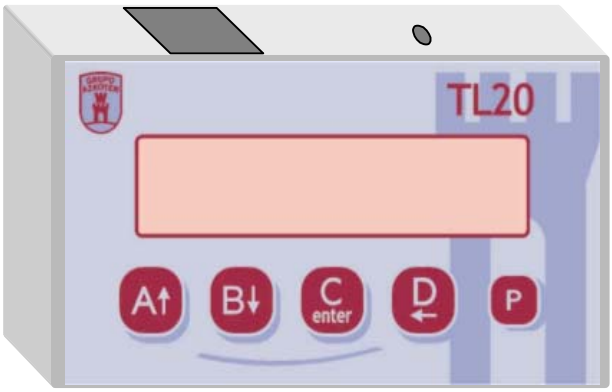
TL20



USER'S MANUAL

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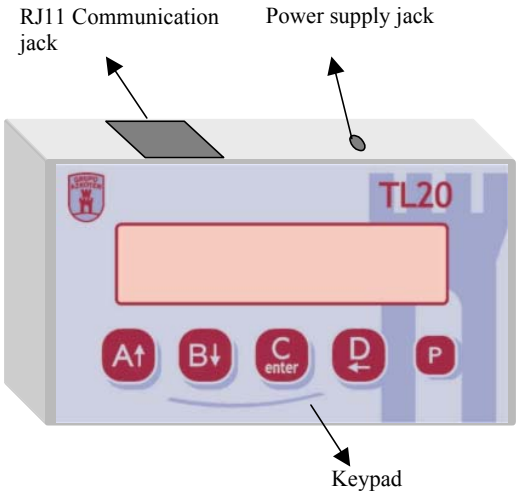
1.- Basic aspects of the TL20



1.1 – Powering the TL20

Power can be supplied to the TL20 in two different ways:

- Connecting the TL20 terminal to a product using the communication socket (see drawing).
- Connecting the TL20 terminal to an external 5 volts DC power supply provided by Azkoyen Medios de Pago.

Both powering options can be simultaneously present. The second one is needed when connecting to the PC.

1.2 – Screen and keyboard. Key functions

The TL20 terminal keyboard consists of five different keys under the screen. The keys may have special functions depending on the context where they are used, but they mainly follow a general behavior described below:

- **A**↑ and **B**↓ keys are used for menu navigation.
- **C**$_{\text{enter}}$ key is normally used for selecting a menu entry or accept an operation.
- **D**← key is used to return to the previous menu in the hierarchy or to cancel an operation.
- **P** key is reserved for the Screen&Keyboard mode available only when Money Changer is remotely operated.

1.3 – RS232 – RJ11 connection

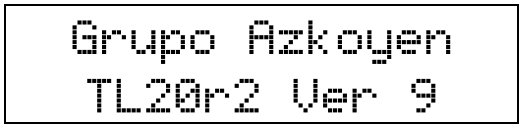
The TL20 can exchange information and files with PCs and a wide range of products. AMPASA supplies all cabling needed for interconnection between the TL20 and any other peripherals.

2.- TL20 operating modes

2.1 – First boot up after manufacturing.

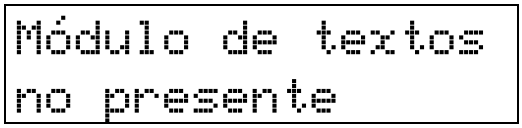
When manufactured, the TL20 is programmed only with a part of the firmware needed for a working device. A set of operations must be performed in order to render a completely operative TL20 terminal

When the TL20 is booted for the first time, the screen shows a test message with the manufacturer name and the software main version, together with a welcoming sound:



This message remains two seconds on the screen. During this interval, the user can set a default contrast for the LCD pushing the key **A↑** . This operation is recommended if the user cannot read the welcoming text.

After the boot-up message a warning message will be shown, indicating that no text module has been loaded to the TL20:



At this point the TL20 waits for a connection from a PC, running the User Tool. The user must follow the steps decribed below to finish the initialization of the TL20:

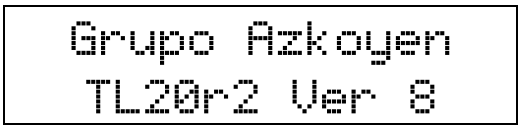
1. The user must connect the TL20 terminal to a PC running the User Tool.
2. After establishing communication with the TL20 the user must format the memory of the terminal to allow reception of the text module.
3. Once the formatting process is finished, the user must download a complete firmware image to the TL20 terminal. This procedure may take several seconds.

When the TL20 firmware update is finished, the terminal will reboot showing the same welcoming message (although the software version may vary). After some time the TL20 main menu will be shown. The user can change the language using the last option of the menu (Configuracion>Indioma).

The default language is Spanish.

2.2 – TL20 normal user operation

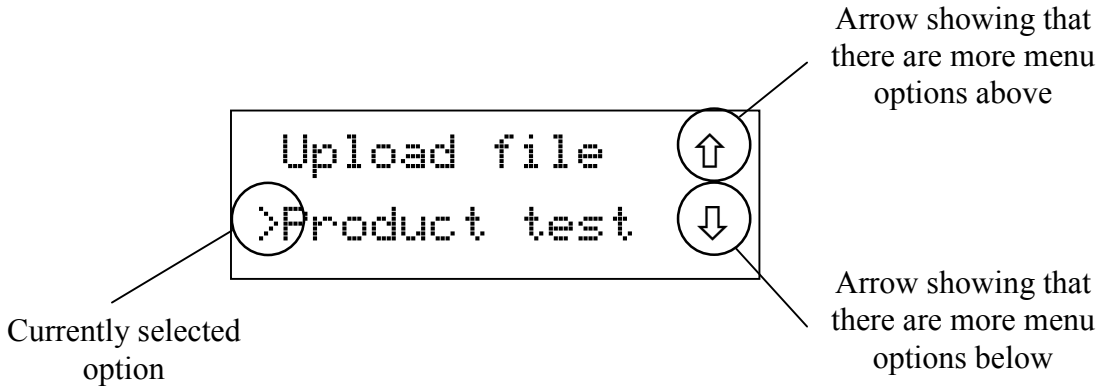
When the TL20 is booted after all the initialization process, the terminal will show the welcoming message with the firmware version loaded on it.:



The user can set the LCD default contrast in the same way as described in the previous section.

After two seconds the main menu is shown

Todos los menús del TL20 muestran una serie de indicadores que ayudan a la navegación a través de los mismos. Estos son:


Arrow showing that there are more menu options above
Upload file
>Product test
Currently selected option
Arrow showing that there are more menu options below

With the **A**↑ and **B**↓ keys the user can navigate through the menu options, going up and down respectively. $\mathbf{C}_{\mathbf{enter}}$ will select the signaled option if it is pushed.

The main menu has the following entries:

- **Download file**: it is used to send files to an AMPASA product. See section 3.2.
- **Upload file**: it is used to receive files form an AMPASA product.. See section 3.3.
- **Product test**: performs a complete product test, inspecting different programming and configuration options of the connected peripheral.. See section 3.4.
- **File manager:** used to enter a file option menu that allows to inspect and erase loaded files (see section 3.1) as well as to show available memory in the TL20 flash storage and format it. (see section 3.4) .

- **Itf Coin Accep:** this option is used to remote control coin acceptors and can be only used if such product is connected to the TL20. See section 4 for more details.
- **Configuration**: opens a new menu with different TL20 configuration options such as the message language, sound and firmware version. See section 3.5.

All menus mentioned above will we described more deeply in sections 3 and 4 of this manual.

2.3 – TL20 in remote mode. Interacting with the PC

The TL20 can be connected to a PC to exchange files and to perform a wide set of operations such as file erase and memory formatting..

The TL20 must be in the main menu in order to establish a valid communication with the PC running the User Tool. If the TL20 is showing any other menu, please exit to the main menu pushing the **D←** key as many times as needed.

The TL20 will show an alert message with a information sound when it establishes a successful communication with the PC:

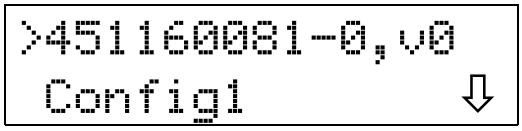
Other messages may appear in the TL20 screen during PC remote operation. The user can return to the main menu pressing the **D←** key.

3.- TL20 stand alone operation

3.1 – File inspection and erasure.

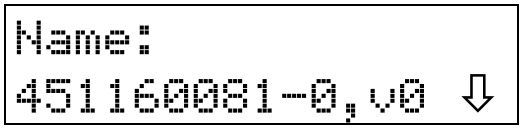
The TL20 can inspect and erase any loaded file. Erasure is not permanent and can be recovered from the User Tool.. File operations can be accessed by choosing the **File Manager** entry of the main menu..

The menu entry **Explore files** will show a list of all files stored in the memory of the terminal.



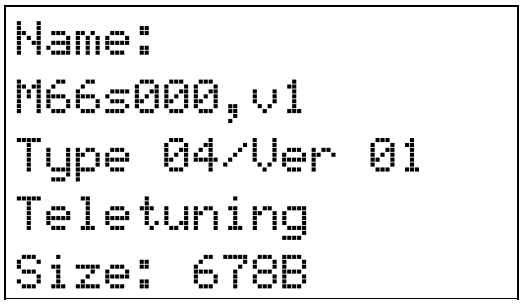
Use keys **A**↑ and **B**↓ to navigate through the files. Press the **C**$_{enter}$ key to show extended information of the selected files. Press the **D**← key to return to the file manager menu.

The extended file information screen will show in a multi-line screen the name, type and size of the selected file:



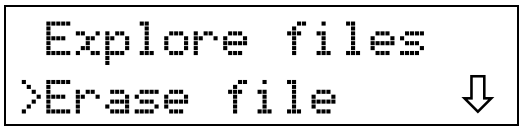
Use the arrow keys to navigate through the information shown.

Los campos de información mostrados dependen del tipo de fichero seleccionado. Por ejemplo, para un archivo de teleajuste, se mostrará la siguiente información

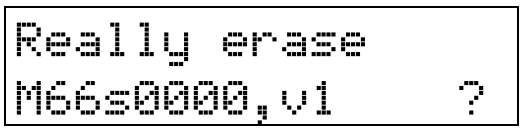


Press **C**$_{enter}$ or **D**← to return to the file list.

Erasing files can be easily done using the option **Erase file** of the file manager menu:

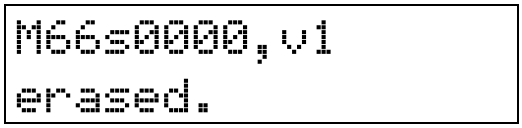


The file list will be shown and the user must select the file to be erased. Press the **C**$_{enter}$ key to start the erase procedure. A confirmation message will be displayed.



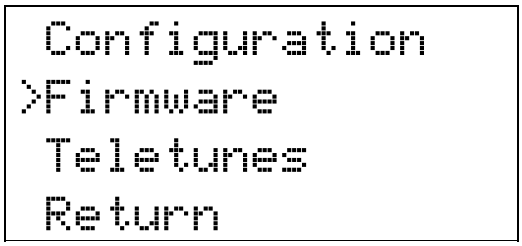
The user can abort the erase operation by pressing the **D**← key. To complete the erasure, press again the **C**$_{enter}$ key. Erased files can be recovered using the PC User Tool.

Once the erasure has been performed, a message indicating the achievement of the operation will be displayed:



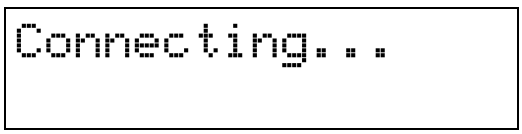
3.2 – Downloading files to a product.

The TL20 terminal can download several types of archives to the connected product. Select main menu option **Download file** to perform this operation. A new menu will appear letting the user to choose the type of file to send:

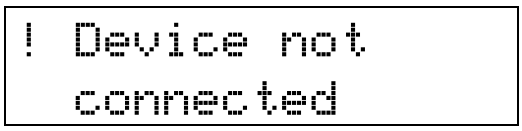


Choose any of the three file types and press **C**$_{enter}$ to accept the selection. It is possible to return at any time to the main menu by pressing the **D**← key or by selecting the **Return** option of the Download file menu.

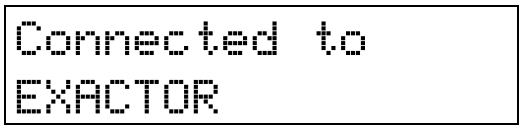
Once the file type is selected, the connection process will start. A message indicating the connection status will be shown:



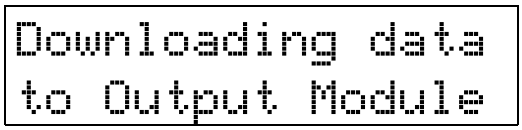
A device must be connected to start downloading a file. If a device is not properly connected, an error message will appear:



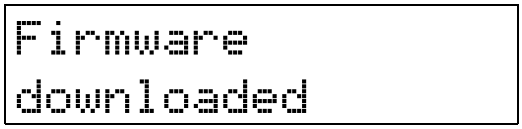
If the connection succeeds, a message will appear indicating the device to which the TL20 is connected to.



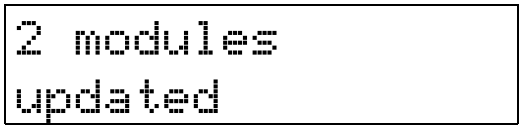
After a small time interval a file list suitable to the connected will be shown. A file must be selected to start the download. Progress will be displayed by different messages indicating data trabsfer to the different modules that compose the connected product:



A message indicating the end of the operation will be displayed when the process will be finished.



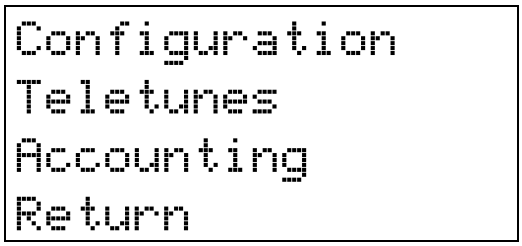
In some cases the TL20 will indicate the number of modified modules in the operation



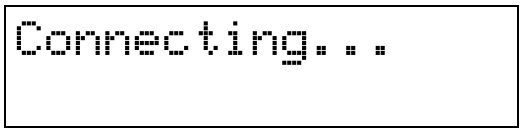
3.3 – Uploading files from a product.

The TL20 can read files from connected devices as well. Entry **Upload file** must be chosen in the main menu to perform such operation.

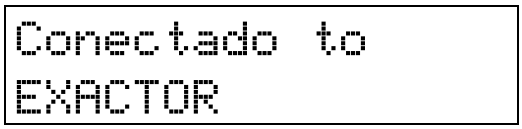
A second menu will appear asking for the type of file to upload:



Choose the desired option to start the upload process by pressing the **C**$_{enter}$ key. It is possible to return to the main menu at any time pressing the **D**← key. Once the file type has been selected a connection attempt will start

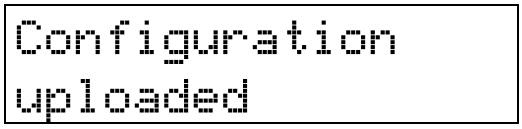


Once the device has been detected, a message showing the device name will be shown:



Data transfer will start immediately after this message is shown. If there are other files with the same information, a confirmation message will be prompted.

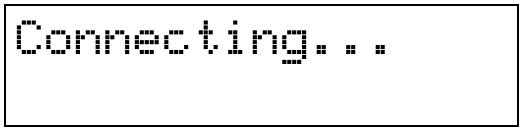
Once the data transfer is completed, a message showing the end of the operation will appear::



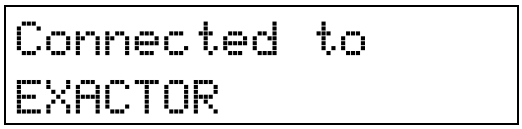
3.4 – Product test

The TL20 terminal can run a complete product test over the device connected to it. To perform such action choose the entry **Product test** from the main menu

The TL20 will start a connection attempt and such situation will be reported on the screen.

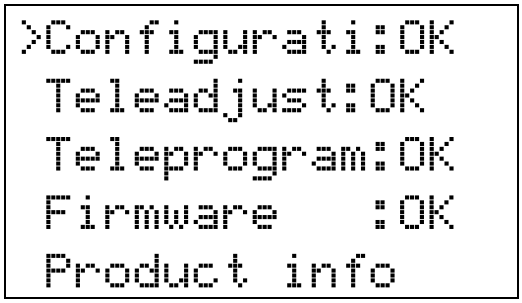


When the connection succeeds, another message will appear:

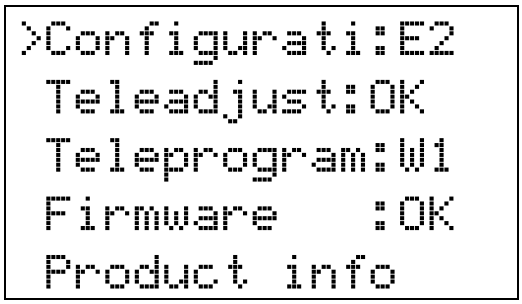


Once all test data is captured, a multi-line list is shown. It is possible to return to the main menu using the **D**← key or extra information can be obtained by selecting one of the lines pressing the key **C**$_{enter}$.

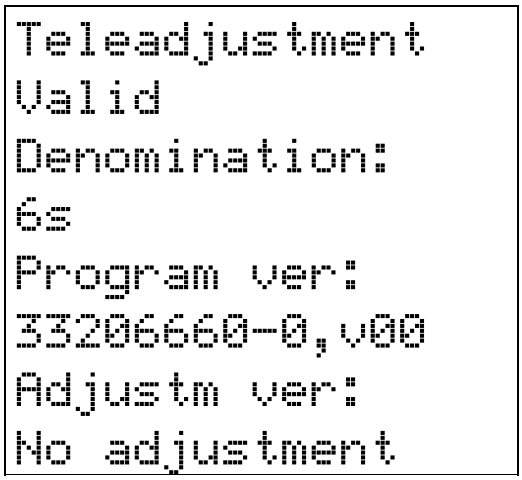
This text list shows the general status of several parameters of the product. When all parameters are correctly set, the display will show the information as follows.



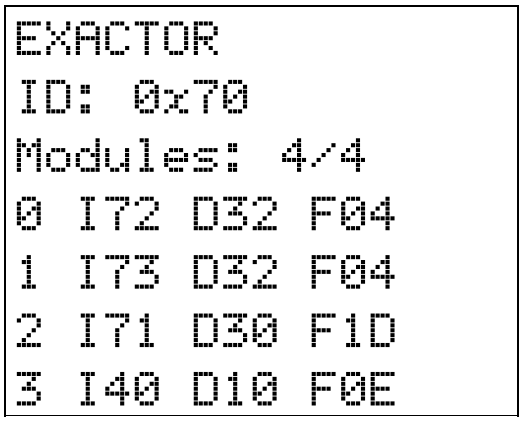
Errors could appear when the product is incorrectly configured. Severe errors are signaled with letter E (Error) while minor errors are signaled as warnings with the letter W. An example of a device with configuration failures is shown below:



Extra information about a selected item can be obtained. An example of teletuning extra information is given below:



Press **Info Product** to get extra information about the tested product. Supplied information consist of the name of the device and the device identification code, as well as the identification, address and options of all modules present in the device:

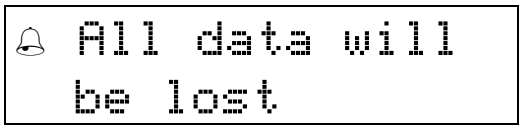


3.5 –TL20 memory formatting. Free memory.

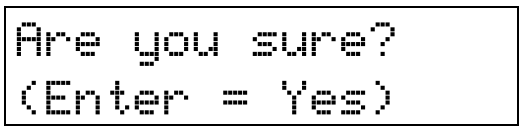
Formatting operation can not be undone. All data will be lost after formatting the TL20 memory.

TL20 memory can be formatted for a complete erase of its contents. This operation will free the maximum quantity available in the terminal. All contents will be lost, including erased files, which won't be recoverable. Press **Flash format** entry on the main menu to perform a complete terminal memory format.

After selecting this entry, a new warning screen will appear:

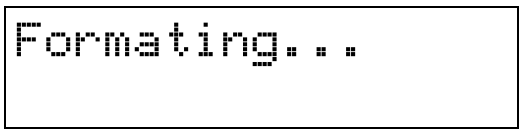


Two seconds later, confirmation will be asked to complete the operation:

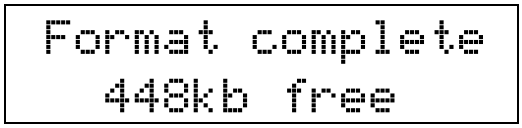


Press **C**$_{enter}$ key to complete the operation. All data will be lost after formatting and there is no way to recover any file after the operation. Therefore, this operation should be done only if you are completely sure of what you are doing.

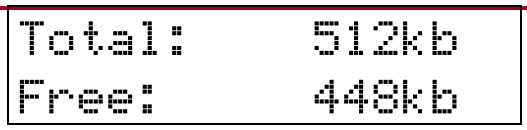
During the format process, a screen showing the progress will appear:



After finishing the operation, the TL20 will show the total amount of memory of the terminal and the amount of memory free for file storing operation.



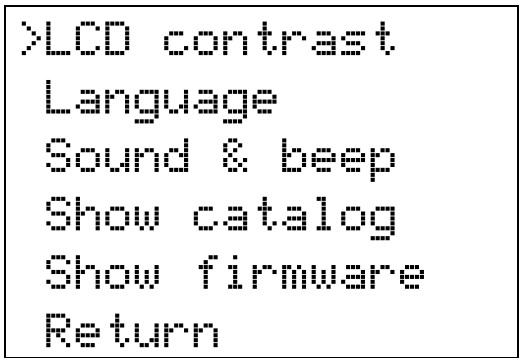
You can always inspect the total memory installed in the terminal board, and the amount of free memory available for storing files. Select **Free space** entry in the memory management menu to get such information :



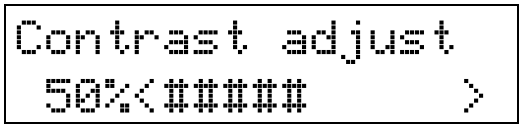
Note: some memory (64 kbytes) is reserved for internal purposes (Multilanguage text chains and firmware back-ups) and the user cannot have the complete space for data storage.

3.5 –TL20 configuration. Sound, contrast and language.

TL20 can be configured in several ways. A special menu for configuration and internal status information can be accessed selecting the **Configuration** entry in the main menu.



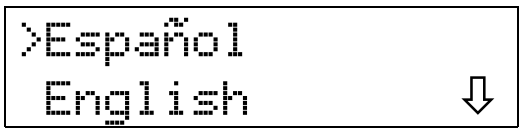
Choose **LCD contrast** to adjust the TL20 LCD contrast. A sliding bar control will appear letting you to select the desired contrast.



Use keys **A**↑ and **B**↓ to adjust the contrast level of the screen. Once the desired contrast is chosen, press $\mathbf{C}_{\text{enter}}$ key to store this value. Contrast level will be kept even if power supply is taken away. You can exit the contrast selection without saving the current level by pressing the **D**←. Default contrast can be reset by pressing the **P** key.

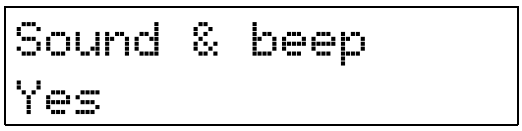
Setting a low level contrast could reduce severely screen visibility, disallowing the user to correctly operate with the terminal. Use the **A**↑ key during the welcome message at boot up to set the default screen contrast.

You can select the language as well. The TL20 is a multilanguage terminal and several languages are available for the user. Choose **Language** in the configuration menu to select the operating language.



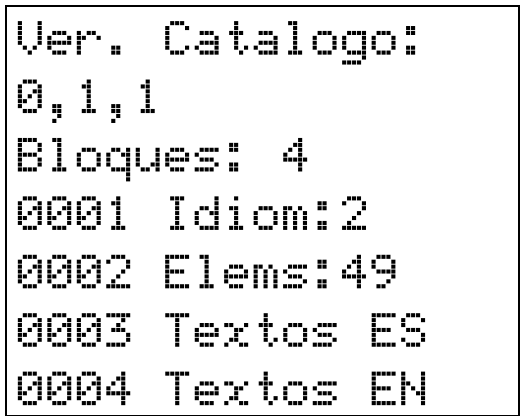
Use keys **A**↑ and **B**↓ to navigate through available languages. Selection will be saved if **C**$_{enter}$ key is pressed. You can abort language selection pressing **D**← key.

Sound can be activated or inhibited by using the **Sound & beep** entry in the configuration menu:

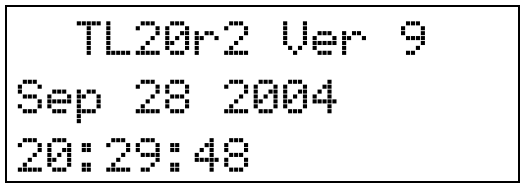


Use keys **A**↑ and **B**↓ to change sound configuration. Press key **C**$_{enter}$ to accept selected configuration and return to the configuration menu. Press key **D**← to exit without saving the changes.

You can obtain information about the product catalog currently loaded in the TL20 by selecting option **Show catalog** in the configuration menu. A multi-line screen will be displayed showing information about the different modules included in the catalog currently loaded:



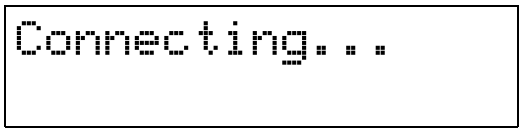
You can get the version number and compilation date of the current firmare loaded on the terminal. Choose **Show firmware** option in the configuration menu to get this information:



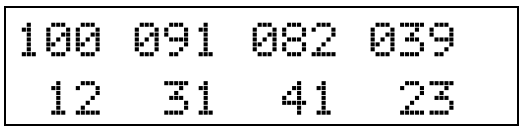
4.- Coin acceptor interface

TL20 can operate as a remote keyboard and screen for a coin acceptor if such device is connected to the RJ11 communication socket

Choose **Itf Coin Accep** to enter this functionality. A connection and product detection process will start. During this process a screen showing the progress will be displayed:



If connection succeeds and the product supports keyboard & screen remote control mode, TL20 will operate as a coin acceptor screen terminal, showing text messages and accepting keystrokes:



You can exit form this operating mode by pressing simultaneously keys **A**↑ and **D**← or removing the power supply from the terminal by pulling out all cables connected to the RJ11 communication socket and the DC jack connector.

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